

a plurality of protrusions on at least one side of said removable midsole section that interact with the shoe to retain said removable midsole section in said shoe;

at least one portion of the outer surface of each said protrusion is concavely rounded relative to an inner section of the removable midsole section adjacent to the concavely rounded outer surface portion, as viewed in a frontal plane cross-section when the removable midsole section is upright and in an unloaded condition;

at least one portion of an inner surface of a side of the removable midsole section is convexly rounded relative to a section of the removable midsole section directly adjacent to the convexly rounded inner surface portion, as viewed in a frontal plane cross-section when the removable midsole section is upright and in an unloaded condition; and

wherein said removable midsole section is removable from said shoe.

REMARKS

This amendment is responsive to the Final Rejection dated January 2, 2002. Claims 11 and 25 have been amended. Claims 11-44 are currently pending in the present application.

The Examiner's approval of the changes to the existing drawings submitted on October 5, 2001 is acknowledged with appreciation.

In paragraph 1, of the Final Rejection dated January 2, 2002, the Examiner has objected to the drawings under 37 C.F.R. § 1.83(a) asserting that the drawings do not show every feature of the invention as represented in the claims. In particular, the

Examiner has stated that use of "mechanical fasteners, snap fits, and combinations thereof" is not clearly depicted in the new Figure 11Q - a schematic representation of "mechanical fasteners, snap fits, and combinations thereof" which was submitted by the Applicant on October 5, 2001, and on this basis has refused to enter this new Figure 11Q. The Examiner has asserted that this drawing does not depict what is claimed in Claim 4 [sic]. (The Applicant presumes that the Examiner's reference to Claim 4 was an inadvertent typographical mistake and that the Examiner intended to refer to Claim 24 since claim 4 has been canceled without prejudice to resubmission.)

The Applicant respectfully disagrees with the Examiner's conclusion. As clearly stated in the MPEP § 608.02, Examiner Note No. 3, if drawings are disapproved, an explanation must be provided by the Examiner. In his rejection of Figure 11Q, the Examiner has merely stated that the drawing "does not clearly show what the applicant is claiming" without providing any rationale or evidence for such a conclusion. As per 37 C.F.R. § 1.81(b), "Drawings may include illustrations which facilitate an understanding of the invention." Claim 24 of the present application states: "... wherein said inner shoe is releasably secured to said outer shoe by a releasable securing structure selected from the group consisting of mechanical fasteners, a snap fit, interlocking geometries, and combinations thereof." Figure 11Q uses interconnected block diagrams to clearly illustrate the attachment of the removable midsole insert 145 to the bottom sole 149 via "mechanical fasteners 301, or adhesives 302, or snap fit 303, or combinations thereof". Moreover, lines 12-20 of page 46 of the specification

describe how, after the bottom sole 149 is attached, the removable midsole insert 145 may be inserted into the interior cavity of the upper 21 and be releasably secured to the top side of the bottom sole 149 by any suitable method, including mechanical fasteners, adhesives, snap-fit arrangements, reclosable compartments, interlocking geometries, or other similar structures. In consideration of the forgoing facts, Figure 11Q quite clearly depicts what is claimed in Claim 24 and what is described on page 46, lines 12-20, of the specification. Therefore, the Applicant respectfully requests that Figure 11Q submitted on October 5, 2001, be entered as part of this application and that this objection to the drawings be withdrawn.

Also in paragraph 1, the Examiner expressly objected to the manner in which the computer control specifics of Claim 14 were depicted in the drawings. The computer controller is not referred to in Claim 14; however, it is referred to in Claims 12 and 13. In Claim 12, at least one computer controller is placed within a compartment located inside the inner shoe. Furthermore, as per Claim 13, that compartment is located in the upper portion of the midsole. No other claims refer to the computer control system. All of these aspects of the control system 300 are shown in Figure 11P, which as been approved by the Examiner. In this figure, the control system 300 is clearly depicted as being located in a shank 169, which is, in turn, positioned within the non-orthotic removable midsole section 145. For at least these reasons, favorable consideration and withdrawal of the objection to the drawings is respectfully requested.

In paragraph 2 of the Final Rejection, the Examiner indicated that part of the disclosed subject matter appears to be outside of the scope of the claims. The Applicant would like to defer restriction of the descriptive matter and figures until it is clear that it will not be necessary for the Applicant to rely on such descriptive matter and figures to support claims or claim amendments during the prosecution of this application. Once the claims are allowable, the Applicant will restrict the descriptive matter and figures, as needed.

35 U.S.C. § 112

In paragraph 3, the Examiner rejected Claims 11-44 under 35 U.S.C. § 112, second paragraph, as being indefinite and failing to clearly claim the subject matter of the invention. Particularly, the Examiner has rejected the term "non-orthotic" as used by the Applicant in reference to structures within the shoe. Claims 39-44 do not contain the term, "non-orthotic" and therefore withdrawal of the rejection of claims 39-44 under 35 U.S.C. §112 should be withdrawn for this reason.

The Examiner has concluded that the term "orthotic" is defined as "anything that gives support to the foot" and, thus, would be indistinguishable from a "non-orthotic" support structure. However, the Examiner's conclusion is inconsistent with the dictionary definition of the terms, "orthotic" and "non" and the Examiner offers no evidence in support of his allegation that the term "non-orthotic" lacks clarity. Although the Examiner has attempted to define the term "orthotic" as "anything that gives support

to the foot”, this definition is vague, overly broad, and is not substantiated by a citation to a specific reference.

However, despite the fact that the applicant does not agree with the Examiner's position, by this amendment, claims 11 and 25 have been amended to delete the term, “non-orthotic” in order to obviate this rejection. Accordingly, favorable consideration, entry of this amendment and withdrawal of the rejection of claims 11-38 under 35 U.S.C. §112 is requested. This amendment after final should be entered on the basis that it puts this application in better form for appeal by eliminating one of the outstanding rejections.

35 U.S.C. § 102

Claims 11 and 20-22 have been rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,706,316 (Tanzi). According to the Examiner, the invention of Tanzi includes a removable midsole 12, a secondary outer sole 14 in which the midsole is incorporated, a device 10 for retaining the midsole on the user's foot when the midsole is not in place, an insole 10, and a device 32 above the sole which attaches the upper portion to the user's foot.

The Applicant respectfully disagrees with the Examiner's characterization of the disclosure of Tanzi. Tanzi is, in fact, a method for assembling a shoe in which adjoining parts of the shoe are permanently attached to each other through some type of permanent bonding process such as heat-activated gluing. According to Tanzi, this

process represents an improvement over other existing methods of permanent attachment such as sewing. (See Tanzi, Col. 1, lines 46-50). The Tanzi patent nowhere mentions any removable structure of the shoe, let alone a removable midsole.

While it is true that any adhesive bond created between two materials can be broken under certain conditions (i.e. the use of a solvent, tensional strains, etc.), the use of such methods is often practically infeasible due to their destructive properties. Glues that are heat-activated, such as those referenced by Tanzi, are formulated to be used for a single application. After being melted once they do not regain their original chemical structure or physical properties. The most simple analogy is the fact that you cannot un-fry an egg. With respect to the shoe as taught by Tanzi, any attempt to separate the midsole from the rest of the shoe would completely destroy the invention's intended design and structure and would render both the shoe and the midsole unusable.

In contrast to Tanzi, the present application claims an inner shoe, which comprises a removable midsole section and a secondary outersole. The inner shoe can be worn independently of the shoe as a whole. As such, the inner shoe can be inserted, removed, and re-inserted to accommodate the needs of the user. The midsole is attached to the sole through one or a plurality of means, including, but not limited to, mechanical fasteners, snap fittings, adhesives, etc. It should be noted that a key property for each of these methods of attachment is releasability. That is, the method of attachment must not only hold the midsole and shoe together, but also allow

the midsole and shoe to be separated without destroying either component. For example, if an adhesive were used as the method of attachment, the bonding capacity of the glue must be "tacky and reusable" (similar to the adhesive of a Post-It™ note) so that midsole may be readily secured and released without causing damage to the midsole or the shoe itself.

The Examiner also refers to an optional shank 14 (see column 3, line 61-62) which can be permanently glued between the sole 18 and the midsole 12. However, the Examiner asserts that this feature is instead a "secondary outer sole 14". Moreover, the "insole" to which the Examiner refers is actually an *optional* liner or "sock" (see column 3, line 61 - column 4, line 6) provided for the comfort of the wearer. The liner, like the other parts of this shoe, cannot be removed or worn independently of the shoe as a whole. And finally, the device 32 is not an "upper" as described by the Examiner, but is instead a "toe counter" designed to provide stiffness and resiliency to the forward, toe section of the shoe.

Unlike the invention of Tanzi, the essence of the present invention, as described in Claims 11 and 20-22, is a removable inner shoe that can be worn independently of the shoe as a whole and that incorporates a midsole device with a novel curvature designed to stabilize the user's foot in a variety of circumstances. Tanzi clearly does not disclose, either expressly or under principles of inherency, each and every element of the present invention, and thus, the present invention is not anticipated by it. See *RCA Corp. v Applied Digital Data Systems, Inc.*, 730 F.2d 1440, (Fed. Cir. 1984), *cert.*

dismd., 468 US 1228, (1984). The Applicant respectfully requests favorable consideration and withdrawal of the rejection of Claims 11 and 20-22 under 35 U.S.C. § 102(b) with respect to Tanzi.

Claims 25-44 have been rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by "international reference WO 97/4612 (WO '612)". As there is no international publication number corresponding to "WO 97/4612", the Applicant presumes that the Examiner intended to reference WO 97/4612⁷ (Adidas AG). The Adidas AG invention is a method for permanently assembling a shoe outer sole, midsole, upper, and toe piece. Despite the similarities between certain diagrams of Adidas AG and certain diagrams of the present application, neither the claims nor the description of Adidas AG teach or suggest a removable inner shoe or removable insert. Rather, Adidas AG teaches at page 12, lines 7-13 that, "The outsole is then attached to the upper by a stitch 80 that weaves around the outer perimeter of the openings thereby connecting the upper 16 to the outsole flanges (e.g., flange 70 in Fig. 8) and the attachment surface 68 (in FIG. 6) of the outsole. In addition, an adhesive can be applied to the attachment surface and/or the interior receiving surface of the upper before the outsole is inserted into the upper to provide an additional bond between the upper and the outsole." Also, Adidas AG states that, "the midsole is then inserted into the interior cavity of the upper and affixed to the top side of the outsole ... An adhesive can be used on the bottom side of the midsole 12 to secure the midsole to the outsole. ... A last 82 is then inserted into the cavity of the upper in order to apply pressure to the

midsole to strengthen the bond between the midsole and the outsole ... "Clearly the outsole is permanently attached to the upper and the midsole 12 is permanently affixed to the outsole and thus is not removable. Thus, Adidas AG does not teach the inner shoe as claimed in the present claims since the midsole 12 of Adidas AG is permanently attached to the outsole and thus is not a removable midsole section.

"Anticipation" under 35 U.S.C. § 102(b) is established only when single prior art reference discloses, expressly or under principles of inherency, each and every element of claimed invention. See *RCA Corp., supra*. Because Adidas AG does not teach or suggest the inner shoe including a secondary outsole, as claimed in the present application, it clearly cannot anticipate any of claims 25-44. Therefore, the Applicant respectfully requests favorable consideration and withdrawal of the rejection of Claims 25-44 under 35 U.S.C. § 102(b) as being anticipated by Adidas AG.

35 U.S.C. § 103

Claims 12 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanzi in view of U.S. Patent Application 5,813,142 (Demon). Demon teaches a control system for regulating the pressure inside cushioning bladders located in the sole of the shoe. This microprocessor-based control system 300, along with the associated pressure sensing circuitry, is situated in the shoe upper (see Figure 1 of Demon). Tanzi, as discussed *supra*, is a method of assembling a shoe in which different elements of a shoe including the upper, midsole, shank, and sole are

permanently bonded together. The Applicant respectfully disagrees with the Examiner's conclusions that the present invention is unpatentable over Tanzi in view of Demon and, therefore, respectfully traverses this rejection and requests reconsideration for the reasons, which follow.

First, the Applicant respectfully disagrees with the Examiner's position that Tanzi discloses all of the limitations of the claims "except for the compartment containing a fluid, a flow regulator, a duct, a control system that automatically adjusts the pressure in the compartment, and a microprocessor" for the reasons given above with respect to the rejection of claim 11 over Tanzi. The present invention claims a control system is situated in a removable midsole insert. Neither Tanzi nor Demon teach or suggest a shoe including a removable midsole insert, and certainly do not teach the specialized removable midsole insert claimed in the present application. More specifically, Tanzi, as previously stated, teaches a method of permanently bonding pre-formed parts of the shoe including the sole, midsole, and upper with heat-activated glue. According to Tanzi, this process represents an improvement over the existing methods of permanent attachment such as sewing. In contrast to Tanzi, the present invention claims a removable midsole section, which forms part of an inner shoe that can be worn independently of the rest of the shoe.

The present invention also represents a non-obvious improvement over Tanzi in view of Demon with respect to the location of the controller. Demon demonstrates a controller situated in the shoe's upper (see Figure 1) where it is exposed to the torsion

created by the wearer during use. Although the Applicant does not take the view that one skilled in the art could utilize Tanzi to arrive at the removable midsole insert as claimed by the present application, even if it were so, the control system in Demon would still not be readily adaptable to be the claimed control system of the present invention. In the present invention, the controller is located in a compartment within the midsole. Positioning the controller in the removable midsole greatly reduces the torsion problems associated with the situating the controller in the shoe upper.

Moreover, the controller of the present invention is located in the removable midsole section such that it can be used either in conjunction with the entire shoe or in conjunction with the inner shoe only, whereas the controller in Demon is designed only to regulate the ambient air entering into and exiting from bladders located in the non-removable shoe sole. Even if Tanzi were to teach a removable midsole, one would have to modify the controller as taught in Demon to function in two different platforms: the inner shoe worn independently of the other parts of the shoe and the inner shoe worn as part of the complete shoe.

The present invention, therefore, clearly represents a non-obvious advancement in the art over Tanzi in view of Demon. Accordingly, for at least these reasons, favorable consideration and withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claims 14-20 and 23-24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanzi as applied to claim 11 in view of WO 97/4612. (Again,

because "WO 97/4612" is not a valid reference number, the Applicant presumes that this is a typographical error and the Examiner intended to refer to WO 97/46127 (Adidas AG). Also, in light of the Examiner's argument, the Applicant presumes that the Examiner intended to reference Claim 11 instead of the actual reference to Claim 41.)

The Examiner first asserts that Tanzi discloses all of the limitations of these claims except for the limitations with respect to the protrusions and the concave and convex portions. The Applicant respectfully disagrees with this assertion for the reasons previously stated, namely, Tanzi teaches a method of permanently bonding pre-formed parts of a shoe including the sole, midsole, and upper with heat-activated glue whereas the present invention claims an inner shoe comprising a *removable* midsole insert. The Examiner has also stated that Figure 22 of Adidas AG depicts a removable midsole. The Applicant, however, maintains that Adidas AG does not teach a removable midsole section or an inner shoe as claimed, but, in fact, teaches a method for permanently assembling a shoe upper 16, an outsole 14, a midsole 12, and a toe piece 18 as discussed above. Adidas Figures 20-26 illustrate "the *method for constructing* the shoe according to the invention". (See Adidas, page 11, line 27). In particular, page 12, lines 7-24 clearly state that that outsole is stitched to the upper and "the midsole is then inserted into the interior cavity of the upper and affixed to the top side of the outsole ... An adhesive can be used on the bottom side of the midsole 12 to secure the midsole to the outsole. ... A last 82 is then inserted into the cavity of the upper in order to apply pressure to the midsole to strengthen the bond between the midsole and the

outsole ..." A removable midsole insert which can be worn independently of the outer shoe is an aspect of the present invention integral to Claim 11 and upon which Claims 14-20 and 23-24 depend. Adidas AG does not cure the deficiencies of Tanzi with respect to the structure claimed in these claims. Thus, for at least these reasons, favorable consideration and withdrawal of the rejection under 35 U.S.C. §103(a) over Tanzi in view of Adidas AG is respectfully requested.

Double Patenting

The Examiner has stated that Claims 11-44 of the present invention conflict with Claims 11-45 of copending U.S. Application No. 09/558,629 and, thus, are in violation of 37 C.F.R. §1.78(b). The Examiner has required the Applicant to either cancel the conflicting claims from all but one application *or* maintain a clear line of demarcation between the two applications. The Applicant has fully complied with the latter by manifestly distinguishing the present application from copending Application No. 09/558,629 by claiming a removable midsole in the former and an insertable midsole orthotic in the latter. The Applicant notes that the rejection made by the Examiner "should be used when the conflicting claims are identical or conceded by applicant to be not patentably distinct." See MPEP § 822. It is readily apparent by comparing the claims of U.S. Application No. 09/558,629 with the claims of the present application that the two sets of claims are not "identical". Furthermore, the Applicant has consistently

asserted that these two sets of claims are patentably distinct. Thus, for these reasons, this objection should be withdrawn.

As per the American Heritage Dictionary, 3d, the term "orthotic" is defined as "the science that deals with the use of specialized mechanical devices to support or supplement *weakened or abnormal* joints or limbs" (emphasis added). As opposed to orthotic shoe devices, which support the weakened or abnormal foot, a non-orthotic shoe device is one that supports a normal, healthy foot. Although the term "orthotic" is a functional limitation, the Applicant emphasizes that it necessarily result in a structural difference in the claimed apparatus since an "orthotic" device must have structure designed specifically to support or supplement weakened or abnormal joints or limbs.

The Examiner has also rejected Claims 11-44 under 35 U. S.C. § 101 as claiming the same invention as co-pending U.S. Application No. 09/558,629. The Examiner has thus provisionally rejected Claims 11-44 of the present invention under 35 U.S.C. § 101 on the basis of statutory-type, same invention double patenting. The Examiner has concluded that there is no difference between the terms "orthotic" and "non-orthotic". The Applicant has amended the claims to omit reference to "non-orthotic" and, as demonstrated above, has differentiated an "inner shoe" from an "insertable midsole orthotic" on the basis of the inclusion of the functional limitation "orthotic" in all claims of U.S. Application No. 09/558,629.

In justifying his rejection, the Examiner has cited *In re Vogel*, 422 F.2d 438 (CCPA 1970). In fact, the court in *In re Vogel* clearly stated that the "same invention"

U.S. Application No. 09/527,019

requires "identical subject matter." *Id.* at 441. An "inner shoe" and an "insertable midsole orthotic" are clearly distinguishable and the present application and U.S. application no. 09/558,629 obviously relate to distinct and different inventions. There is no overlap between the claims of the two applications and, accordingly, the same invention double patenting rejection should be withdrawn.

Favorable consideration and issuance of a Notice of Allowance are requested.

Respectfully submitted,

KNOBLE & YOSHIDA LLC

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Date

By:

Kevin J. Dunleavy
Kevin J. Dunleavy, Esq.
Registration No. 32,024

Customer No. 21302
Knoble & Yoshida LLC
Eight Penn Center, Suite 1350
1628 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103
Telephone: 215-599-0600
Facsimile: 215-599-0601

Dated: April 30, 2002



RED-LINE VERSION OF CLAIMS 11 AND 25 SHOWING AMENDMENTS

11. (Amended) An [non-orthotic] inner shoe which comprises:

a removable midsole section sized to fit inside and form part of the sole of a shoe designed to receive and retain said removable midsole section;

a secondary outer sole on at least a portion of the outer surface of the removable midsole section to provide traction or wear resistance when said [non-orthotic] inner shoe is worn without the shoe designed to receive and retain said removable midsole section;

a device associated with the removable midsole section for retaining the [non-orthotic] inner shoe on an intended wearer's foot when worn without the shoe designed to receive and retain the removable midsole section; and

wherein said [non-orthotic] inner shoe is removable from said shoe in order to wear said [non-orthotic] inner shoe independently of said shoe.

25. A [non-orthotic] removable midsole section sized to fit inside a shoe and form part of the shoe designed to received and retain said removable midsole section, which comprises:

an inner surface and an outer surface which together define the removable midsole section having a lateral side, a medial side and a middle portion located between the lateral and medial sides;

a plurality of protrusions on at least one side of said removable midsole section that interact with the shoe to retain said removable midsole section in said shoe;

at least one portion of the outer surface of each said protrusion is concavely rounded relative to an inner section of the removable midsole section adjacent to the

Serial No. 09/527,019

concavely rounded outer surface portion, as viewed in a frontal plane cross-section when the removable midsole section is upright and in an unloaded condition;

at least one portion of an inner surface of a side of the removable midsole section is convexly rounded relative to a section of the removable midsole section directly adjacent to the convexly rounded inner surface portion, as viewed in a frontal plane cross-section when the removable midsole section is upright and in an unloaded condition; and

wherein said removable midsole section is removable from said shoe.